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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,782	09/01/2000	Paul R. Marshall	PHB 34,386	5639

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EXAMINER	
CHOW, CHARLES CHIANG	
ART UNIT	**PAPER NUMBER**
2685	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/653,782	MARSHALL ET AL.	
	Examiner	Art Unit	
	Charles Chow	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8,10 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action
(For RCE 10/19/2005)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maru (US 4,977,611) in view of Lee (US 5,369,798).

Regarding **claim 1**, Maru teaches a method of operating a receiver, energizing the receiver [power on at t0, col. 4, lines 34-37, Fig. 4B, abstract, Fig. 1/Fig. 9], detecting the presence of a carrier signal [In applicant claim 2, the detecting of the presence of the carrier is to measuring RSSI. Maru teaches the detecting of signal strength at detector 60, Fig. 10, abstract], such that the receiver 3 is de-energized substantially immediately without waiting for expiration of any time period [the no data received on any channels, to switch off the power supply to receiver 3 at t5 of the PS(R) signal, substantially immediate with time delay, Fig. 4B, col. 4, lines 47-53; the switch off power to receiver at t7 of the PS(R) in Fig. 5B, col. 4, lines 54-68].

Maru fails to teaches the accessing the quality of the demodulated signal, such that the receiver is de-energized, if the quality is not acceptable.

Lee teaches demodulating the detected carrier signal [the detecting, selecting of the largest RSSIs, abstract], accessing the quality of the demodulated signal, such that of the receiver is de-energized if the quality of the demodulated signal is not acceptable [the accessing the quality count for 10 failure counts in step 115, then to turn off phone at step 116, Fig. 4; switch off portable telephone in col. 2, lines 3-5],

the decoding the demodulated signal if the signal quality is acceptable [the processor resumes normal operating to demodulating overhead message, col. 1, lines 51-57], in order to reliably controlling of the battery power saving during abrupt RSSI changes [col. 1, lines 35-40]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Maru with Lee's fail counts for quality, in order to reliably controlling of the battery power saving during abrupt RSSI changes.

Regarding **claim 2**, Maru teaches the characterized by measuring the received signal strength RSSI as a means for detecting the presence of the carrier signal [the detecting of RSSI at detector 60, Fig. 10].

Regarding **claim 3**, Lee teaches the characterized by measuring signal quality as a measure for determining if a signal is decodable [the detecting of word synchronization data by processor 508 to measure the quality by increasing the number of failure to detect the synchronization word, col. 4, lines 54-63].

Regarding **claim 4**, Maru teaches a communication system comprising a primary station [central station] having transmitter for transmitting signal [the central station has the transmitter for transmitting signal to subscriber telephone 100, col. 2, line 50] and at least one secondary station [portable radio telephone 100] having a receiver [3] for receiving signals from the primary station [central station],

the receiver comprising signal receiving means [3] for detecting the presence of a received signal [60 detects the presence of the signal strength, Fig. 10],

power control means [9, 12] for de-energizing the receiver substantially immediately without waiting for expiration of any time period if the presence of the signal is detected and detected signal is not decodable [the no data received on any channels, the substantially immediate to switch off the power supply to receiver 3 at

t5 of the PS(R) signal in Fig. 4B, col. 4, lines 47-53; the switch off power to receiver at t7 of the PS(R) in Fig. 5B, col. 4, lines 54-68, to shut off battery power without any time period delay].

Maru fails to means for detecting the quality signal of received signal. Lee teaches these features [the processor 50 counts the quality for failed detection of received synchronization word, col. 4, line 54-63], in order to reliably controlling of the battery power saving during abrupt RSSI changes [col. 1, lines 35-40]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Maru with Lee's fail counts for quality, in order to reliably controlling of the battery power saving during abrupt RSSI changes.

Regarding **claim 5**, Maru teaches the means for determining RSSI [the field strength detector 60] is coupled to the signal receiving means [the 60 is coupled to the receiving means, at the output of the IF amplifier 56, for signal from antenna 1, Fig. 10].

2. Claim 8, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maru-'611 in view of Deluca et al. (US 5,144,296).

Regarding **claim 8**, Maru teaches a battery powered radio 100 comprising a receiver circuit 3, the receiver circuit operable to produce a received signal from a channel [the demodulating the received telephone signal on a channel in Fig. 3, col. lines 51-61],

a received signal strength indicator circuit [60, col. 6, lines 44-49] coupled to the receiver circuit [coupled at output of IF amplifier 56], the received signal strength indicator circuit operable to produce an output indicating an amount of power in the channel [60 indicates the strength of the respective channel, col. 1, lines 58-60],

a demodulator circuit coupled to the receiver circuit, the demodulator operable to produce a demodulated signal from received signal [the demodulating received signal from antenna 1, at receiver & demodulator circuitry 51-55, Fig. 10],

a microprocessor 5 coupled to the demodulator circuit [the demodulation in 51-56 of receiver 3 is coupled to CPU 5 and strength indicator circuit [60],

wherein the microprocessor 5 is operable to energize and de-energize the receiver circuit, via power switch 9; determine the presence of a carrier with a carrier detector 60 on the power in the channel.

Maru teaches the de-energize the receiver substantially immediately without waiting for expiration of any time period if the presence of the signal is detected and detected signal is not decodable [the no data received on any channels, the substantially immediate to switch off the power supply to receiver 3 at t5 of the PS(R) signal in Fig. 4B, col. 4, lines 47-53; the switch off power to receiver at t7 of the PS(R) in Fig. 5B, col. 4, lines 54-68, to shut off battery power without expiration of any time period].

Maru fails to teach the quality indicator coupled to the demodulator, the carrier detect false rate associated with the acceptable signal quality.

Deluca teaches a signal quality indicator circuit [error counting 420] coupled to the demodulator circuit [demodulator in receiver 402]; a decoder circuit 412 coupled to the demodulator circuit [demodulator in receiver 402],

determine the presence of a carrier [strong, weak signal, abstract] with a carrier detect false rate [bit error rate in col. 7, line 44], based at least in part on the power in the channel, and to determine an acceptable signal quality with a signal quality false rate [bit error rate], based at least in part on an output of the signal quality indicator circuit [the quality detecting means in col. 14, lines 1-6];

wherein the microprocessor (MC68HC05) is operable to energize the receiver circuit for a first period of time [col. 5, line 63 to col. 6, line 7], and if the carrier is determined to be present to then maintain the receiver in the energized state until a determination is made as to whether acceptable signal quality has been obtained [the time interval 336 to enable decoder, col. 5, lines 63 to col. 6, line 7; the hard bit error quality during time interval 338, 340, 344,350 in col. 6, lines 25-62], de-energize the receiver if the carrier is determined to be present and the signal quality is not acceptable [based on the error count to generate first control signal to suspend the supply of power to receiver, col. 17, line 1 to col. 18, line 4], in order to improved battery power saving technique with the adaptive controlling of the battery power for battery power [col. 1, lines 6-11, col. 2, lines 8-44]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Maru with Deluca's adaptive battery power saving, in order to save more battery power.

3. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maru in view of Deluca, as applied to claim 8 above, and further in view of Besharat et al. (US 6,219,540 B1).

Regarding **claim 10**, Besharat teaches the microprocessor is operable to de-energize the receiver circuit if the carrier is determined to not be present, without performing a signal quality determination [the out-of-range detection, causing suspending of power supply to receiver 104, abstract; the absence of acceptable transmission, to generate out or range signal, col. 7, lines 38-42; col. 9, lines 34-36; col. 11, lines 18-20; the out-of-range detection and disable power using power control means 156 in col. 2, line 63 to col. 3, line 17], in order to save battery power

when received signal quality is weak [col. 1, lines 38-40]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Maru, Deluca with Besharat battery power control, in order to save battery power when received signal quality is weak.

Regarding **claim 11**, Besharat teaches a metering unit [signal quality detector 154] coupled to the microprocessor [108, Fig. 1]. Deluca teaches an decoder circuit [address decoder 412] coupled to the microprocessor [MC68HC05, col. 8, lines 34-36]. Regarding a radio transmitter circuit coupled to the encoder circuit, it is well known in the technology for coupling the encoder to a radio transmitter.

Response to Argument

4. Applicant's arguments with respect to claims 1-5, 8, 10-11 have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant's RCE with amendment based on the augment for the no teachings for the receiver is de-engergized substantially immediately without waiting for expiration of any time period, **Maru (US 4,977,611)** teaches a method of operating a receiver, for saving battery power, energizing the receiver [via switch 9, CPU 5], detecting the presence of a carrier signal [signal strength detector 60, Fig. 10, abstract; In applicant claim 2, the measuring RSSI is to detecting the presence of the carrier], such that the receiver 3 is de-energized substantially immediately without waiting for expiration of any time period [the substantially immediate to switch off the receiver 3 for 9 second in Fig. 5B, at t7 of the PS(R) signal in Fig. 5B, without expiration of any time period; the switch off receiver section 3 immediately in col. 7, lines 33-38].

Lee (US 5,369,798) teaches demodulating the detected carrier signal [the detecting, selecting of the largest RSSIs, abstract], accessing the quality of the demodulated

signal, such that of the receiver is de-energized if the quality of the demodulated signal is not acceptable [the accessing the quality count for 10 failure counts in step 115, then to turn off phone at step 116, Fig. 4; switch off portable telephone in col. 2, lines 3-5], the decoding the demodulated signal if the signal quality is acceptable [the processor resumes normal operating to demodulating overhead message, col. 1, lines 51-57].

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow C.C.

October 28, 2005.

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